

CLAIMS

1. A composition for removing an adhesive material comprising:

5 an alkaline amine reagent coupled with a non-ionic wetting agent.

2. The composition of Claim 1, wherein the alkaline amine reagent comprises an alkaline aliphatic amine reagent.

3. The composition of Claim 1, wherein the alkaline amine reagent is selected from diethylamine; dibutyl amine; dipentyl amine; any methyl, ethyl, or propyl amine with an oxygen or hydroxyl attached to the aliphatic part of the reagent; aniline; diphenylamine; ethylene diamine; methyl amine; dimethylamine; ethyl amine; butyl amine; or ethanolamine.

4. The composition of Claim 3, wherein the alkaline aliphatic amine reagent is ethanolamine.

5. The composition of Claim 1, wherein the non-ionic wetting agent is selected from 1-butyl-2-propanol; 1-ethoxy-2-propanol; 2-(2-ethoxy)-ethanol; 1-ethoxyethanol; 1-propanol; 1-butanol; 1-pentanol; 1-hexanol; 2-ethyl-1-butanol; 2-ethyl-1-hexanol; 2-methyl-1-butanol; 2-butoxyethanol; phenyl ethanol; or 2-amino ethanol.

6. The composition of Claim 1, wherein the alkaline amine reagent has a surface tension less than about 52 dynes.

7. The composition of Claim 1, wherein the alkaline amine reagent has a surface tension less than about 30 dynes.

8. The composition of Claim 1, wherein the alkaline amine reagent has a surface tension less than about 25 dynes.

5 9. The composition of Claim 1, wherein the non-ionic wetting agent has a surface tension less than about 52 dynes.

10 10. The composition of Claim 1, wherein the non-ionic wetting agent has a surface tension less than about 30 dynes.

15 11. The composition of Claim 1, wherein the non-ionic wetting agent has a surface tension less than about 25 dynes.

20 12. The composition of Claim 1, wherein the alkaline amine reagent has a boiling point of greater than about 130° C.

25 13. The composition of Claim 1, wherein the alkaline amine reagent has a boiling point of greater than about 150° C.

30 14. The composition of Claim 1, wherein the alkaline amine reagent has a boiling point of greater than about 160° C.

35 15. The composition of Claim 1, wherein the non-ionic wetting agent has a boiling point of greater than about 130° C.

40 16. The composition of Claim 1, wherein the non-ionic wetting agent has a boiling point of greater than about 150° C.

17. The composition of Claim 1, wherein the non-ionic wetting agent has a boiling point of greater than about 160° C.

5 18. The composition of Claim 1, wherein the alkaline amine reagent and the non-ionic wetting agent have a surface tension less than about 52 dynes and a boiling point of greater than about 160° C.

10 19. The composition of Claim 1, wherein the alkaline amine reagent and the non-ionic wetting agent have a surface tension less than about 30 dynes and a boiling point of greater than about 150° C.

15 20. The composition of Claim 1, wherein the alkaline amine reagent and the non-ionic wetting agent have a surface tension less than about 25 dynes and a boiling point of greater than about 130° C.

20 21. A method of removing an adhesive material comprising:

applying a composition to the adhesive material such that the composition wets and penetrates the adhesive material to break down adhesive bonds;

25 wherein the composition comprises an alkaline amine reagent coupled with a non-ionic wetting agent.

30 22. The method of Claim 21, wherein the alkaline amine reagent is selected from diethylamine; dibutyl amine; dipentyl amine; any methyl, ethyl, or propyl amine with an oxygen or hydroxyl attached to the aliphatic part of the reagent; aniline; diphenylamine; ~~ethylene diamine~~; methyl amine; dimethylamine; ethyl amine; butyl amine; or ethanolamine.

35 23. The method of Claim 21, wherein the non-ionic wetting agent is selected from 1-butyl-2-propanol; 1-ethoxy-2-propanol; 2-(2-ethoxy)-ethanol; 1-ethoxyethanol; 1-

propanol; 1-butanol; 1-pentanol; 1-hexanol; 2-ethyl-1-butanol; 2-ethyl-1-hexanol; 2-methyl-1-butanol; 2-butoxyethanol; phenyl ethanol; or 2-amino ethanol.

5 24. The method of Claim 21, wherein the alkaline amine reagent comprises ethanolamine and the non-ionic wetting agent comprises 2-butoxyethanol.

10 25. The method of Claim 21, wherein the adhesive material is selected from rubber cements; mastics; pressure sensitive adhesives; acrylics; vinyl acetates; ethylene vinyl acetates; vinyl acrylics; styrene monomers and copolymers; neoprene latexes; nitrile latexes; SBR; natural rubber latexes; two component urethanes and epoxies; or
15 moisture cured urethanes.

 26. A method of removing a floor covering which is attached to a surface by an adhesive material, the method comprising:
20 applying a composition to the floor covering such that the composition contacts the adhesive material and wets and penetrates the adhesive material to break down adhesive bonds between the floor covering and the surface; and
 lifting the floor covering from the surface;
25 wherein the composition comprises an alkaline amine reagent coupled with a non-ionic wetting agent.

30 27. The method of Claim 26, wherein the alkaline amine reagent is selected from diethylamine; dibutyl amine; dipentyl amine; any methyl, ethyl, or propyl amine with an oxygen or hydroxyl attached to the aliphatic part of the reagent; aniline; diphenylamine; ethylene diamine; methyl amine; dimethylamine; ethyl amine; butyl amine; or ethanolamine.

35 28. The method of Claim 26, wherein the non-ionic wetting agent is selected from 1-butyl-2-propanol; 1-ethoxy-2-propanol; 2-(2-ethoxy)-ethanol; 1-ethoxyethanol; 1-

propanol; 1-butanol; 1-pentanol; 1-hexanol; 2-ethyl-1-butanol; 2-ethyl-1-hexanol; 2-methyl-1-butanol; 2-butoxyethanol; phenyl ethanol; or 2-amino ethanol.

5 29. The method of Claim 26, wherein the alkaline amine reagent comprises ethanolamine and the non-ionic wetting agent comprises 2-butoxyethanol.

10 30. The method of Claim 26, wherein the adhesive material is selected from rubber cements; mastics; pressure sensitive adhesives; acrylics; vinyl acetates; ethylene vinyl acetates; vinyl acrylics; styrene monomers and copolymers; neoprene latexes; nitrile latexes; SBR; natural rubber latexes; two component urethanes and epoxies; or
15 moisture cured urethanes.

20 31. The method of Claim 26, wherein the floor covering is selected from commercial carpeting; residential carpeting; carpet tiles; sheet vinyl; VCTs; ceramic tiles; porcelain tiles; clay tiles; slate tiles; quarry tiles; marble; travertine; or hardwood flooring.

25 32. A composition for removing an adhesive material comprising:
 an alkaline amine reagent.

30 33. The composition of Claim 32, wherein the alkaline amine reagent comprises an alkaline aliphatic amine reagent.

35 34. The composition of Claim 32, wherein the alkaline amine reagent is selected from diethylamine; dibutyl amine; dipentyl amine; any methyl, ethyl, or propyl amine with an oxygen or hydroxyl attached to the aliphatic part of the reagent; aniline; diphenylamine; ethylene diamine; methyl amine; dimethylamine; ethyl amine; butyl amine; or ethanolamine.

35. The composition of Claim 34, wherein the alkaline aliphatic amine reagent is ethanolamine.

5 36. The composition of Claim 32, wherein the alkaline amine reagent has a surface tension less than about 52 dynes.

10 37. The composition of Claim 32, wherein the alkaline amine reagent has a surface tension less than about 30 dynes.

15 38. The composition of Claim 32, wherein the alkaline amine reagent has a surface tension less than about 25 dynes.

39. The composition of Claim 32, wherein the alkaline amine reagent has a boiling point of greater than about 130° C.

20 40. The composition of Claim 32, wherein the alkaline amine reagent has a boiling point of greater than about 150° C.

25 41. The composition of Claim 32, wherein the alkaline amine reagent has a boiling point of greater than about 160° C.

30 42. The composition of Claim 32, wherein the alkaline amine reagent has a surface tension less than about 52 dynes and a boiling point of greater than about 160° C.

35 43. The composition of Claim 32, wherein the alkaline amine reagent has a surface tension less than about 30 dynes and a boiling point of greater than about 150° C.

44. The composition of Claim 32, wherein the alkaline amine reagent has a surface tension less than about 25 dynes and a boiling point of greater than about 130° C.